

MK 432 ELECTRONIC TIME FUZE

A New Fuze for the US Navy

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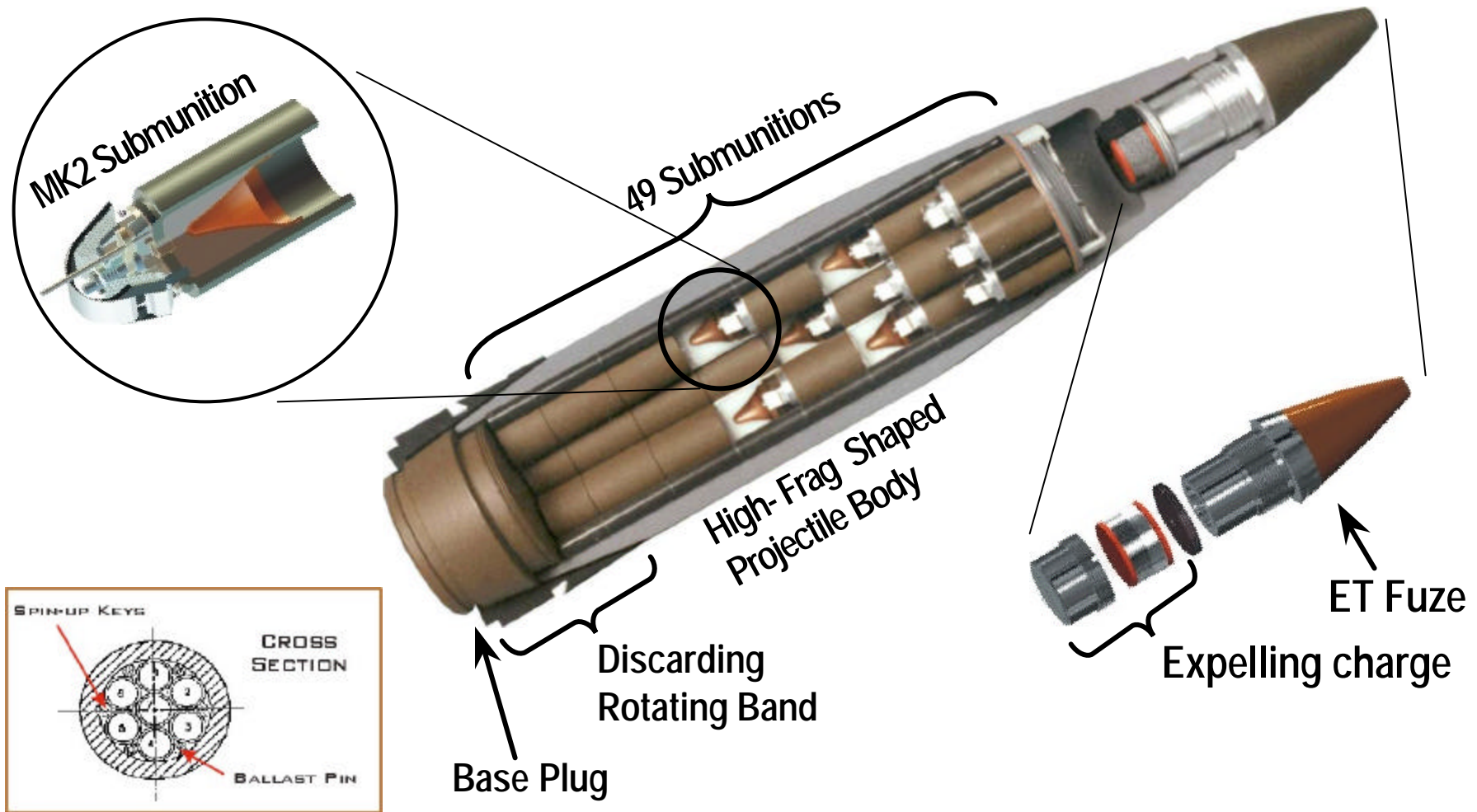


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Navy 5" Cargo Projectile EX 172 HE-ICM



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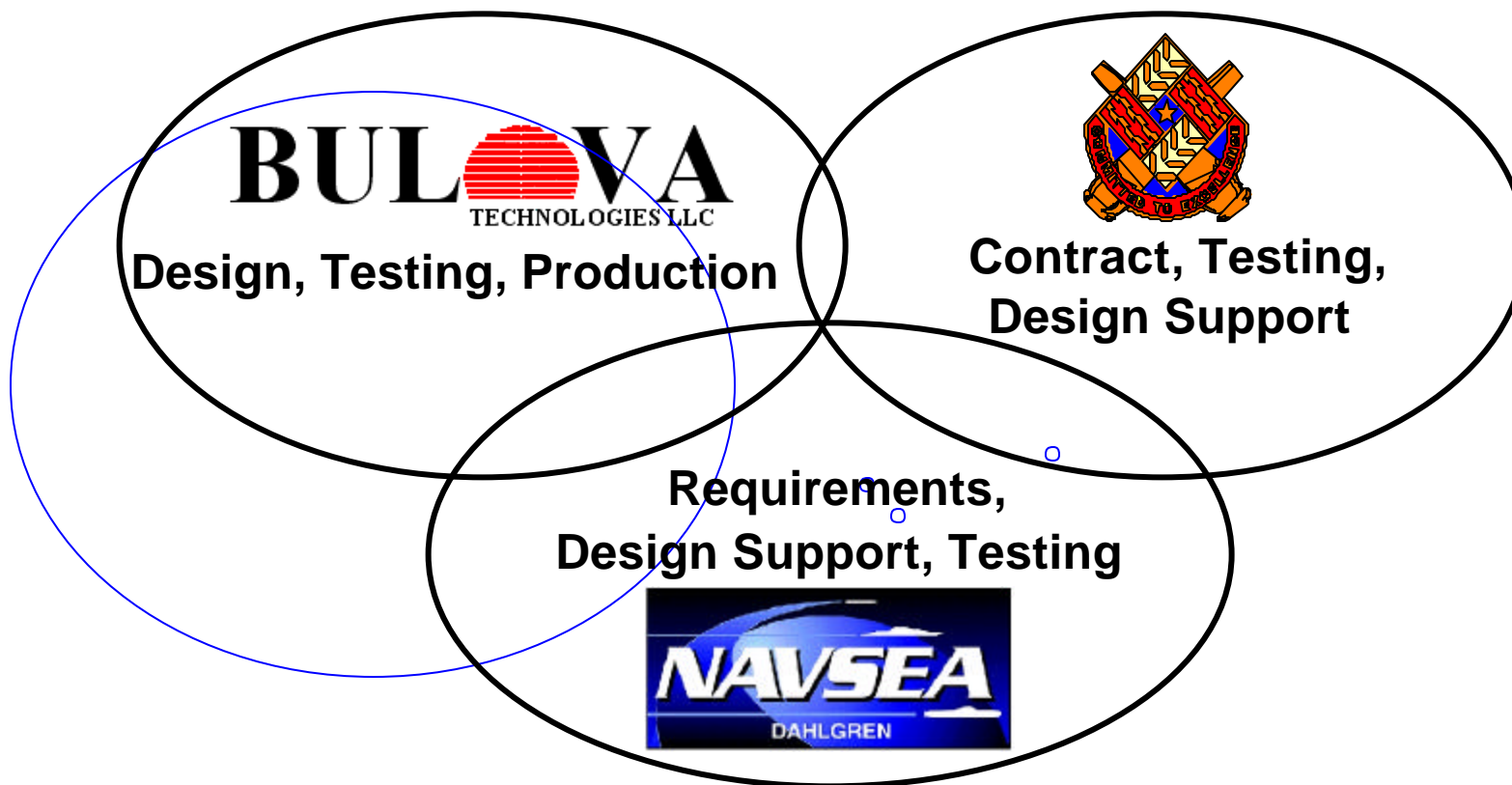
Fuze Alternatives

	MK 429 MFF	Simplified MK 429	Modified MOFA	Modified M762A1
Development Cost	None	\$1,000,000+	\$1,000,000+	\$1,000,000+
Projectile Compatibility	Proven	Proven	TBD	Proven
Overhead Safety	Acceptable	Acceptable	TBD	Excellent
Unit Cost	High	Medium	Low	Lowest
Total Cost 14,600 Fuzes	High	High	Medium	Low



Team Approach

- Take Advantage of M762A1 MCP in Process
- Amended Army's MCP Contract on May 2000





Requirements

- **Three Major Changes to M762A1 Fuze:**
 - **Compatibility w/ Gun Weapon System**
 - **Inductive Set Changes**
 - **Battery Activation**
 - **From Activate on Set to Activate at Gun Launch**
 - **Targets**
 - **Increased Timer Precision**



Inductive Set Changes

M762A1

- **PIAFS Setter**
- **19 Bit Message**
- **Single Set Mode**
- **Time Resolution**
 - **0.1 Second**

MK 432

- **MK 34 Setter**
- **26 Bit Message**
- **Continuous Set Mode**
- **Time Resolution**
 - **0.01 Second**

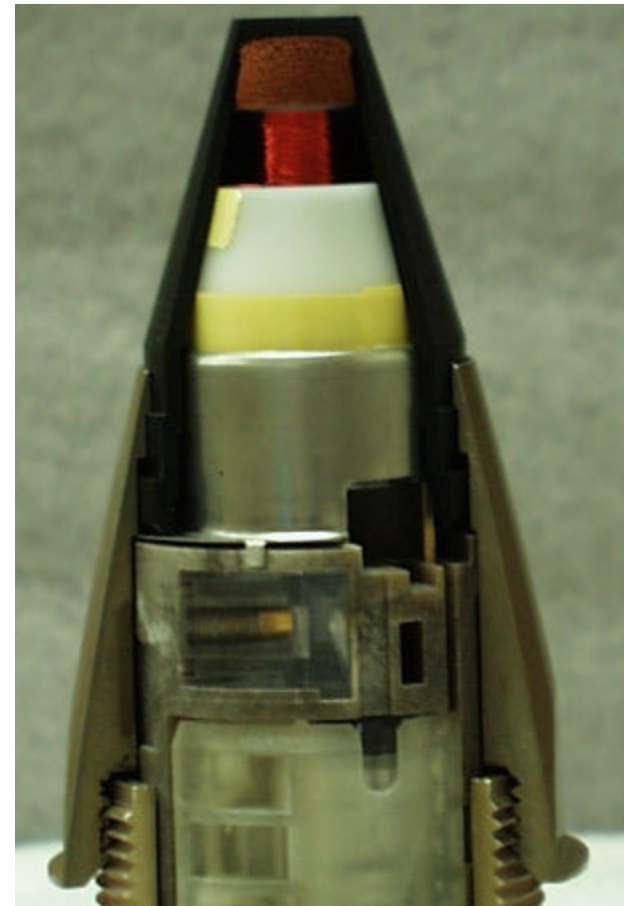


Inductive Set Changes

M762A1



MK 432





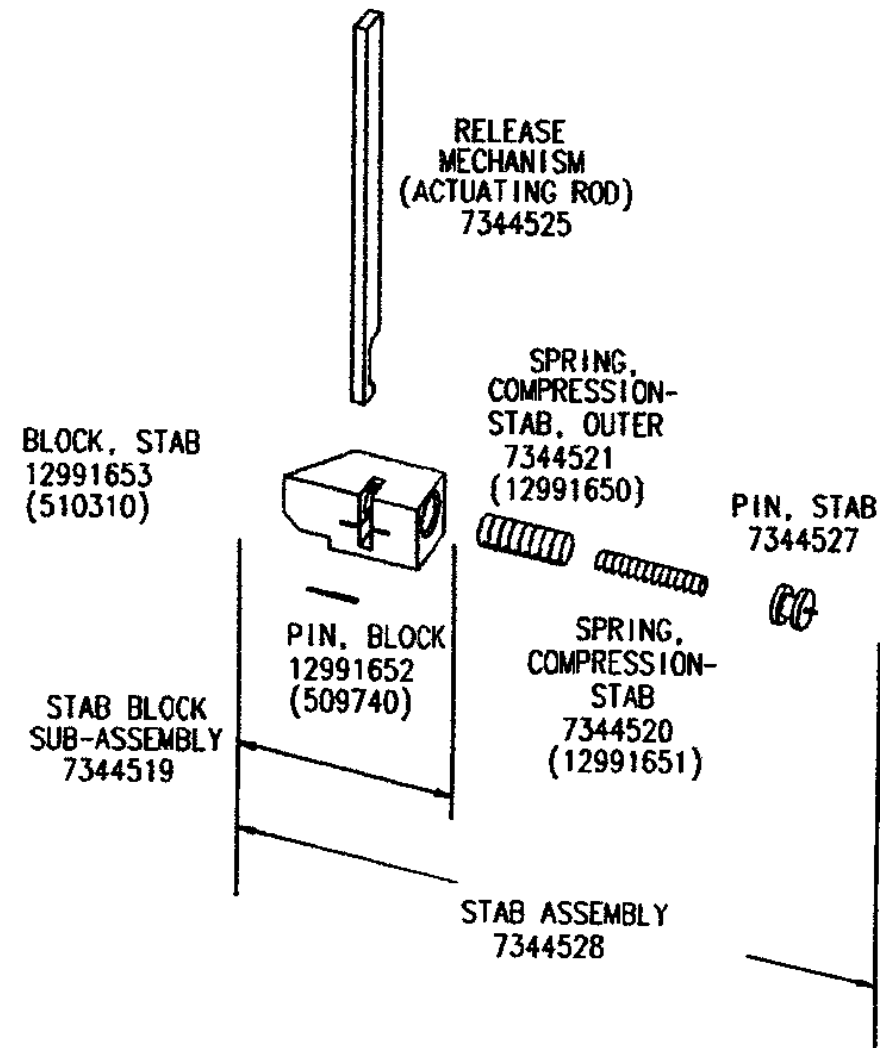
Battery Activation

- **M762A1**
 - **Activation on Set (Manual or Inductive)**
- **MK 432**
 - **Activation at Gun Launch Required**
 - **Redundant Activation Methods:**
 - **Electrical Activation**
 - **Spin Switch Closure Initiates Battery Primer**
 - **Mechanical Activation**



Battery Activation

- **Mechanical Activation**
 - **Modified Actuating Rod Release Stab Pin Via Setback Force**
 - **Stab Pin Has Less Mass**
 - **Entire Stab Assembly Lubricated**
 - **Design Proven in Vertical Recovery Tests**





Timer Precision

- **M762**
 - **Settable to 199.9s**
 - **Set Resolution of 0.1 Seconds**
- **MK 432**
 - **Settable to 327.66s**
 - **Set Resolution of 0.01 Seconds**
 - **Greater Precision Needed for SuW Targets**
 - **System Errors Reduce Benefit at Long Range**



Other Changes

- **Eliminated Manual Set Capability**
- **Eliminated Point Detonating Backup Mode**
 - **MK 432 Will Dud in the Event of a Primary Mode Failure**
- **New Carbon Filled Ogive**
 - **Added Protection During Electromagnetic Environmental Effects**



Qualification

- **400 Fuzes Completed on 30 March**
- **First 10 Gun Fired at Yuma on 21 March**
 - **Only 10 Months from Contract Award**
 - **9 Successful Firings, 1 No Test**
- **60 Fuzes for EEE Testing**
- **102 Fuzes for MIL-STD-331B**
- **Qualification Completed Summer 2001**



Production

- **Scheduled to Begin July 2001**
- **14,600 Fuzes Delivery October 2001**
- **Old Fashion Build to Print Contract**
 - **No Performance Specification**
- **On Schedule for a Record Setting Delivery**
 - **16 Months from PIP Contract to Completion of Production**